

CLAIMS:

1. A method of detecting a defective pixel of an image-pickup apparatus having a plurality of solid-state image-pickup devices each receiving a respective one of spectral lights obtained by separating light incident to said image-pickup apparatus, comprising the steps of:

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generating a value relating to a defect of an inspected pixel on each said solid-state image-pickup device based on a signal level produced from said inspected pixel and signal levels produced from a plurality of pixels in the vicinity of said inspected pixel on said solid-state image-pickup device; and

detecting a defective pixel based on said value relating to a defect of said inspected pixel of each said solid-state image-pickup device.

2. A method according to Claim 1, wherein the step of generating said value relating to said defect of said inspected pixel is the step of calculating a difference between a signal level from said inspected pixel and an average value of signal levels from said plurality of pixels in the vicinity of said inspected pixel on said solid-state image-pickup device, said difference being calculated in each solid-state image-pickup device; and

said detecting step includes the steps of calculating deviations of said difference of each said solid-state image-pickup device from average values of

differences of at least other solid-state image-pickup devices and comparing said calculated deviations with one another to determine the defective pixel on said solid-state image-pickup device.

3. A method according to Claim 2, wherein, in said detecting step, when said deviations calculated for said plurality of solid-state image-pickup devices is larger than a predetermined threshold value, it is detected that said inspected pixel on said solid-state image-pickup device is a defective pixel.

4. A method according to Claim 2, wherein said average value of said differences is an average value of differences of said plurality of solid-state image-pickup devices.

5. A method according to Claim 1, wherein said plurality of pixels in the vicinity of said inspected pixel include a plurality of pixels adjacent to the pixels in the vicinity of said inspected pixel.

6. A method according to Claim 1, wherein said generating step and said detecting step are implemented in each time when video signals are produced from said plurality of solid-state image-pickup devices.

7. An image-pickup apparatus comprising:  
a separator for separating light incident to said image-pickup apparatus to provide a plurality of spectral lights;  
a plurality of solid-state image-pickup devices for receiving said spectral lights to produce

video signals respectively;

a comparator circuit for comparing a signal level from an inspected pixel and signal levels from a plurality of pixels in the vicinity of said inspected pixel on said solid-state image-pickup devices;

a detection circuit for detecting a defective pixel on said plurality of solid-state image-pickup devices based on said signal level obtained from said comparator circuit;

a correction circuit responsive to said detection circuit for correcting a signal level from a defective pixel on said solid-state image-pickup device; and

a video signal processing circuit for producing a video signal on the basis of the corrected signal level from the correction circuit.

8. An image-pickup apparatus according to Claim 7, wherein said comparator circuit calculates, in each said solid-state image-pickup device, a difference between a value of the signal level from said inspected pixel and an average value of signal levels from said plurality of pixels in the vicinity of said inspected pixel on said solid-state image-pickup device and generates a value relating to said defective pixel, and

said detection circuit includes a first arithmetic operation circuit for calculating, in each solid-state image-pickup device, deviations of said difference of each said solid-state image-pickup device

from average values of differences of at least other solid-state image-pickup devices and comparing said calculated deviations with one another to detect the defective pixel on said solid-state image-pickup device.

9. An image-pickup apparatus according to Claim 8, wherein said detection circuit includes a second arithmetic operation circuit for detecting that said inspected pixel is a defective pixel, when said deviations calculated in said plurality of solid-state image-pickup devices is larger than a predetermined threshold value.

10. An image-pickup apparatus according to Claim 8, wherein said average value of said differences is an average value of differences of said plurality of solid-state image-pickup devices.

11. An image-pickup apparatus according to Claim 7, wherein said plurality of pixels in the vicinity of said inspected pixel include a plurality of pixels adjacent to said pixels in the vicinity of said inspected pixel.

12. An image-pickup apparatus according to Claim 7, wherein said correction circuit includes circuits responsive to said detection circuit for replacing a defect signal from said defective pixel on said solid-state image-pickup device with an average value of said signal levels from said plurality of pixels in the vicinity of said defective pixel.

13. An image-pickup apparatus according to Claim 9, wherein said correction circuit includes circuits responsive to said detection circuit for multiplying a defect signal from said inspected pixel by a predetermined defect correction coefficient to produce a corrected signal.
14. An image-pickup apparatus according to Claim 13, further comprising a control circuit for changing at least one of said predetermined threshold and said defect correction coefficient in accordance with image conditions.
15. An image-pickup apparatus according to Claim 14, wherein said image conditions contain at least one of the presence/absence of storage, a storage time and a video gain in said solid-state image-pickup device.
16. An image-pickup apparatus according to Claim 7 further comprising an external circuit for controlling said defect signal in accordance with a level of said defect signal of said defective pixel.